What is claimed is:

1. A polarization inversion method for ferroelectrics, comprising the steps of:

forming a plurality of electrodes on a first surface of a ferroelectric crystal that has been subjected to a single polarization, the electrode having a predetermined pattern; and

forming a local polarization inversion portion in said ferroelectric crystal by applying an electric field to front and back surfaces of said ferroelectric crystal via the electrodes,

wherein first portions of said ferroelectric crystal, each corresponding to a corresponding one of the electrodes and second portions between the first portions are subjected to a polarization inversion, and one polarization inversion portion having a desired pattern is formed.

2. The method according to claim 1, wherein one polarization inversion portion is formed for each of the electrode groups by use of periodic electrodes in which a plurality of electrode groups composed of the electrodes are periodically formed as said electrodes, thus forming a periodic polarization inversion structure in which the polarization inversion portion is periodically formed.

3. The method according to claim 1, wherein a corona wire is disposed on a second surface of said ferroelectric crystal opposite to said first surface thereof, and said electric field is applied to said ferroelectric crystal by corona charging by use of said corona wire and said electrodes.

4. The method according to claim 2, wherein a corona wire is

disposed on a second surface of said ferroelectric crystal opposite to said first surface thereof, and said electric field is applied to said ferroelectric crystal by corona charging by use of said corona wire and said electrodes.

5. The method according to claim 1, wherein said ferroelectric crystal is a $LiNb_XTa_{1-X}O_3$ ($0 \leq X \leq 1$) crystal or a crystal doped with one of MgO, ZnO and Sc.

6. The method according to claim 2, wherein said ferroelectric crystal is a $LiNb_XTa_{1-X}O_3$ ($0 \leq X \leq 1$) crystal or a crystal doped with one of MgO, ZnO and Sc.

7. The method according to claim 3, wherein said ferroelectric crystal is a $LiNb_XTa_{1-X}O_3$ ($0 \leq X \leq 1$) crystal or a crystal doped with one of MgO, ZnO and Sc.

8. The method according to claim 4, wherein said ferroelectric crystal is a $LiNb_XTa_{1-X}O_3$ ($0 \leq X \leq 1$) crystal or a crystal doped with one of MgO, ZnO and Sc.

9. A method of fabricating an optical wavelength conversion device using the polarization inversion method of ferroelectric according to one of claims 2 to 8, the method comprising the steps of:

using a nonlinear optical crystal as the ferroelectric crystal that has been subjected to the single polarization; and

forming in said nonlinear optical crystal the periodic polarization inversion structure corresponding to a periodic pattern of the electrode groups.